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ABSTRACT

The objectives of the SPEAR (Specialized Psycho-Educational Adult Remediation) project were to both introduce and incorporate mainstreamed adult basic education through offering specialized services to learning-disabled adults. This program both identified and educationally remediated specific learning disabilities and included educational and career planning suited to the individual. Of the 20 adults enrolled in the program, 12 attended regularly and remained in the program long enough to show some improvement in their performance. Following this narrative section, approximately one-half of the document is comprised of an outline of a slide presentation explaining the project. Topics covered include the three areas addressed by the project--selected perceptual-motor skills, language development skills, and conceptual skills--and Project SPEAR objectives. A table detailing grade level pre-test and post-test comparison of students is appended. (YLB)

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FINAL REPORT
OF
Specialized Psycho-Educational Adult Remediation
The SPEAR Project

September, 1979 to June, 1980

This is the final report of the
SPEAR Project, a one year special
project funded by Colorado Depart-
ment of Education in Greeley, CO.
at Manna Foundation, Inc.

U.S. DEPARTMENT OF HEALTH,
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SPECIALIZED PSYCOEDUCATIONAL ADULT REMEDIATION

The SPEAR Project

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ABSTRACT

Specialized Psycho-Educational Adult Remediation (SPEAR)
funded by Colorado Department of Education

Special Project

Located at Manna Foundation, Inc., Greeley, CO. 1979-80

The SPEAR Project is a program funded through Adult Basic Education to academically remediate learning disabled adults to a personally satisfying level of performance based on identified goals. Specific learning disabilities differ from other disabilities which are primarily due to mental retardation, emotional disturbance, poor vision or cultural disadvantage. A person with a specific learning disability is of average intellect. Some characteristics common to the learning disabled are: inability to read at grade or age level, poor spelling or math computation, difficulty with concepts or ideas, poor writing, printing or drawing, difficulty copying geometric figures, short attention span, poor results on group tests (achievement and intelligence), writing reversals (not for Tom), radically high/low achievement in certain areas, poor emotional control, low tolerance to frustration, poor short/long memory, poor peer group relations, awkwardness, stumbling, falling or dropping things, and poor time/distance judgment.

The SPEAR instructional program includes testing students for competencies in basic skills, identifying specific learning disabilities, providing immediate educational counseling, assisting the student in clarifying educational goals, providing individualized educational programs, providing instruction on a one-to-one basis, communicating with social

service and government agencies and local business to
increase awareness of this area of special education.

INTRODUCTION

The incidence of learning disabilities estimated nationally is 20% of the total population. According to the 1970 census the adult population 16 years and above in the Weld County area is approximately 61,759. Out of this figure it is estimated that over 12,351 adults are learning disabled.

Called the "invisible handicap", individuals with specific learning disabilities have no physical, mental or behavioral defects. The effects of the disability become apparent only when the individual attempts to process information and learn new material. The disabilities can be debilitating in both everyday living situations and educational situations.

Basic educational skill development is offered through a local agency to adults both bilingual and monolingual achieving between 0-12 grade levels that do not have a high school diploma. School children with specific learning disabilities have the opportunity to have their needs met educationally through PL 94-142 which earmarks this handicap to be diagnosed and educationally remediated. Adults haven't this opportunity and most have never been diagnosed. The needs of adults that have specific learning disabilities such as written or verbal expression, conceptual organization problems, or psycho-motor problems are not being met adequately. These adults risk failure a second time upon enrolling in adult education programs that are not designed to handle these learning difficulties.

Many adults had trouble achieving academically during their early school years, due to undiagnosed learning disabilities including psycho-motor or perceptual handicaps. These adults enroll in the traditional Adult Education Classroom and even though they are given the opportunity to begin again their learning disabilities often remain undiagnosed and the problem continues. Some have gone the route of skirting the handicap and given instructions in accepting the handicap and compensating for it. This approach is good as an immediate goal but the disability still remains, only masked. This project addressed itself to the long range goals of students completing the GED and/or further education.

The SPEAR Project was a program that both identified and educationally remediated specific learning disabilities including educational and career planning suited to individual needs. The adults served generally had an average to above average intellectual ability and had been educationally handicapped in this way by accident (i.e. aphasia, stroke) or a childhood neurological problem resulting in a learning problem that could only be diagnosed through psycho-educational means.

Consequently, such adults, in the past, have settled for the immediate goal of coping with a problem that is potentially solvable through educational remediation by professionals in the field.

The objectives of the SPEAR Project were to both introduce and incorporate mainstreaming Adult Basic Education through offering specialized services to the Learning Disabled adult education population. The main objectives of the SPEAR Project were:

- 1) To test 20 students for competencies in the basic skills and identify learning disabilities.
- 2) To provide immediate educational counseling for all new students concerning remediation of learning disabilities and to assist students in clarifying goals.
- 3) Based on initial diagnosis to develop an educational program to meet the needs of each individual student (including speech therapy, occupational therapy, vocational counseling).
- 4) To provide individual instruction on a one-to-one basis in a quiet friendly academic atmosphere and non-competitive instructional setting to 20 students.
- 5) To arrange instructional activities which maximize the possibility of success.
- 6) To initiate publicity activities through the public school, commercial media, and other means.

METHODS AND PROCEDURES

The methods and objectives of the SPEAR Project were disseminated at the annual conference of the Commission on Adult Basic Education in Houston, Texas, April 3, 1980.

The following is a complete outline of this presentation explaining the Project in more detail.

SPECIALIZED PSYCHO-EDUCATIONAL ADULT REMEDIATION (SPEAR PROJECT)

- * 1. SPEAR - Program is sponsored by the Adult Basic Education Section of the Colorado State Department of Education. This educational laboratory is located at Greeley, Colorado.
2. The Psycho-Educational approach takes these factors into consideration:
 - gross motor development
 - sensory-motor integration
 - perceptual-motor skills
 - language development
 - conceptual skills
 - social skills
3. Of these factors the SPEAR Project addresses three areas:
 - selected perceptual-motor skills
 - language development skills
 - conceptual skills

4. Selected Perceptual-Motor Skills. The functional utilization of primary auditory, visual, and visual-motor skills.

- auditory decoding
- visual memory (ex. penmanship)
- visual-motor memory (ex. penmanship)
- visual-motor fine muscle coordination
- visual-motor speed of learning

- a) auditory decoding - The ability to understand sounds or spoken words. The pupil can follow simple verbal instructions, can indicate by gesture or words the meaning or purpose of auditory stimuli such as animal sounds, nouns or verbs.
- b) visual memory - The ability to recall accurately prior visual experiences. The pupil can recall from visual cues where he stopped in a book, can match or verbally recall objects removed or changed in the environment, can match briefly exposed symbols.
- c) visual-motor memory - The ability to reproduce motor-wise prior visual experiences. The pupil can draw designs and symbols following brief exposure, can reproduce letters, numbers, simple words on demand, can portray prior

objects or events through gestures or drawings, can reproduce patterns and identify hidden materials. (ex. penmanship)

- d) visual-motor fine muscle coordination - The ability to coordinate fine muscles such as those required in eye-hand tasks. The pupil can write legibly, trace and imitate body movements without difficulty, can cut, manipulate and judge fine physical responses without gross errors.
- e) visual-motor speed of learning - The ability to learn visual-motor skills from repetitive experience. The pupil can respond with increasing speed to rote learning tasks such as copying digit or letter sequences, spelling, specific arithmetic processes, and gross motor skills such as jumping over a rope.

5. Language Development Skills. The current functional stage of total psycho-linguistic development which includes:

- vocabulary
- fluency and encoding
- word attack skills
- reading comprehension
- writing
- spelling

- a) vocabulary - The ability to understand words.
The pupil has a basic receptive vocabulary in

accord with chronological age and educational opportunity.

- b) fluency & encoding - The ability to express oneself verbally. The pupil can communicate verbally, has average fluency of speech without undue hesitation or stuttering, uses coherent sentence structure.
- c) word attack skills - The ability to analyze words phonetically. The pupil can make proper phonetic associations, break down words phonetically, recognise component words.
- d) reading comprehension - The ability to understand what one has read. The pupil can recall story and paraphrase plot, can explain or relate meaningfulness of what has been read.
- e) writing - The ability to express oneself through written language. The pupil can write simple sentences and communicate ideas through paragraph, letter, story, or essay.
- f) spelling - The ability to spell in both oral written form. The pupil spells within general age expectancy.

6. Conceptual Skills. The functional level of concept attainment and general reasoning ability in the following areas:

- number concepts
- arithmetic processes

- reasoning
 - general information
 - classification
 - comprehension
- a) number concepts - The ability to count and use simple numbers to represent quantity. The pupil can count forward and backward to 100, count by twos, group simple quantities upon request.
- b) arithmetic processes - The ability to add, subtract, multiply, and divide. The pupil can demonstrate knowledge of basic processes within expectation of his chronological age.
- c) arithmetic reasoning - The ability to apply basic arithmetic processes in personal and social usage of problem solving. The pupil can purchase goods and account for funds, knows coinage, and exchange, can calculate time differentials, understands weights and measures.
- d) general information - The ability to acquire and utilize general information from education and experience. The pupil is aware of major local and national current events, knows local geography, has concept of city, state, and nation.
- e) classification - The ability to recognize lo-

gical relationships. The pupil can sort objects by classification, recognize subclasses, verbalize common elements in class identity.

f) comprehension - The ability to use judgment and reasoning in common sense situations. The pupil responds to factual reasoning when situation is explained to him, can recognize alternatives in situations and can judge actions accordingly, can identify logical reason for given actions.

7. Students whose intellectual capacity is greater than their academic achievement due to learning disabilities benefit from an educational evaluation in which the disabilities are defined according to academic skill development using the following diagnostic criteria:
8. Individualized tests measuring:
 - general intellectual abilities
 - general language ability (ex. reading)
 - general conceptual abilities (ex. math)
9. Five areas are measured according to grade level in reading and fifteen in math. For a general intellectual ability estimate the Peabody Picture Vocabulary Test is used for vocabulary in formation and speed.
10. Based on these evaluations, the student is counseled and assisted in clarifying educational goals.
11. Individualized tutoring is provided on a one-to-one

basis by a professional educator.

12. As needed, communication is made with local employment, social, governmental and educational agencies.

13. There are several initial signs that could indicate problems in learning. These problems would not necessarily appear alone, but in clusters. They include:

- 14. - inability to read at grade level
 - poor spelling, math computation
 - difficulty with concepts or ideas
- 15. - poor writing, printing, drawing
 - difficulty copying geometric figures
- 16. - short attention span
 - poor results on group tests (achievement and intelligence)
- 17. - radically high/low achievement in certain areas
 - poor emotional control
 - low tolerance to frustration
- 18. - poor short/long term memory
 - poor peer group relations
 - awkwardness, stumbling, falling or dropping things (clumsy-soft signs)
 - poor time/distance judgment

19. This program attempts to diagnose learning disabilities academically through objective-empirical data as opposed to subjective evaluation. These are standardized tests mainly and student's verbal responses and descriptions

of learning difficulties.

Many educators and laymen aren't clear about what a learning disability is. According to the federal definition of the term, specific learning disabilities differ from other disabilities primarily due to:

- mental retardation
- emotional disturbance
- poor vision
- cultural disadvantage

Specific learning disabled persons are of potentially average intellect or above.

20. The following include other objectives of the program that weren't specified earlier: classes are scheduled according to enrollee's available time, the number of sessions vary according to skill level and student availability.

21. The SPEAR Project enables Adult Education to come in compliance with Section 504 Rehabilitation Act.

22. A Learning Prescription may be made for a student based on:

23. - evaluation
- self-determined goals (short-term immediate or long-ranged)

24. Students are encouraged to set their hours of attendance and attend as scheduled. Self motivation is important. 24. Job related skills are emphasized according to:

- identified goals

- academic needs

25. Follow-up surveys are planned to determine the success of the program and possible improvement.

SUMMARY

The Specialized Psycho-Educational Adult Remediation approach is an attempt by both Colorado Department of Education and Manna Foundation, Inc. to serve and develop educational alternatives for the learning disabled adult. Furthermore it allows Adult Education programs to cooperate and introduce a form mainstreaming into Adult Basic Education. Finally this project enables Colorado Adult Education to come in compliance with Section 504 of the Rehabilitation Act.

During the course of the year twenty adults were enrolled on the SPEAR Program. Of the twenty, twelve attended regularly and remained on the program long enough to show some improvement in their performance.

The following table is the result of the data gathered in time for this report.

Further information concerning the program can be obtained by writing the Colorado Department of Education, State Office Building, 201 East Colfax Avenue, Denver, Colorado 80203, or Pakeri Mann, Project Director at Manna Foundation, Inc. 1802 16th Street, Greeley, Colorado 80631.

TABLE * GRADE LEVEL PRE-TEST & POST-TEST
COMPARISON

SUBJECT	TOTAL MATH		TOTAL READING		LETTER IDENTIFICATION		WORD IDENTIFICATION		WORD ATTACK		WORD COMPREHENSION		PASSAGE COMPREHENSION		MATH CONTENT	MATH OPERATIONS	MATH APPLICATIONS
	pre-test	post-test	pre-test	post-test	pre-test	post-test	pre-test	post-test	pre-test	post-test	pre-test	post-test	pre-test	post-test	approximate growth from pre-test to post test		
A	3.7	4.1	1.8	1.9	3.3	2.9	1.6	1.7	1.8	1.8	1.5	1.8	1.7	2.0	.6	.1	.4
B	4.4	5.3	4.6	4.7	4.3	6.2	9.9	6.4	3.3	3.2	2.7	3.0	5.4	7.2	.8	1.4	.8
C	7.3	7.2	5.1	6.3	6.2	12.9	6.4	6.9	1.9	2.2	7.1	9.3	9.9	10.2	.5	.5	.5
D	4.1	5.7	7.5	9.1	12.9	12.9	9.6	10.6	12.9	12.9	2.8	5.3	8.4	9.9	2.0	.1	2.0
E	8.6	9.0	8.6	9.0	12.9	12.9	11.0	12.9	12.9	12.9	6.3	11.2	12.9	12.9	.1	1.8	.1
F	1.7	1.8	1.1	1.1	1.9	1.9	1.0	1.0	1.2	1.2	1.2	1.2	1.1	1.1	.4	.1	0
G	2.8	2.7	1.5	1.6	3.8	3.8	1.5	1.6	1.4	1.2	1.2	1.3	1.5	1.7	0	.1	.1
H	6.3	7.1	3.8	4.9	3.4	4.3	4.4	4.6	2.6	4.4	4.4	7.7	4.7	6.4	1	2.0	.1

Grade levels were determined by the Key Math and Woodcock Reading Mastery Tests. The Math Content, Math Operations and Math Applications final grade level growth scores are estimates made by averaging the grade level pretest and posttest scores in each area of the Key Math test and determining the difference. The scores vary from the total score as the Key Math test was not designed to give a reliable score for these three areas alone...only for a total Math grade level score. The scores are shown this way for the purpose of comparison.

The students as a whole averaged 1/2 year or better from the program in both reading and math. They ranged from .1 of a year to over 2 years progress in both math and reading total scores. The average attendance on the program was about six (6) weeks total.

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